

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(Currently Amended)** A method for generating and processing images for use in dentistry, ~~characterized in that it comprises~~ comprising the steps of:

acquiring the position of at least one first reference surface, which is associated with at least one portion of either the upper dental arch or the lower dental arch of a patient; ~~and~~

acquiring the position of at least one second reference surface, which is associated with at least ~~one portion of the other of said upper and lower dental arches~~ and/or with a handpiece of the tool type operated by a health operator inside the mouth of the patient;

wherein said acquiring steps comprise the emission of electromagnetic radiation;

~~transducing~~ transducing the acquired positions of said first reference surface and of said second reference surface into signals to be transmitted to an electronic processing unit, in which a CAD software is implemented;

generating a three-dimensional image of an application site of a prosthesis, formed in said portion;

processing the image of said application site and of at least one image selected from a group that comprises: the image of the portions of the upper dental arch or of the lower dental arch that are adjacent thereto; the image of the portions of

the upper dental arch or of lower dental arch that are antagonist thereto; the image of the state of the portion of the upper dental arch or lower dental arch in which the application site is formed, before the creation of it; the image that represents the relative motion between the maxilla and the mandible; the image or images of a database of models of teeth, or others;

in order to create, with said CAD software, at least one of

1) a three-dimensional model of said prosthesis with a shape suitable to reproduce or modify at least one of the occlusal relationship with at least one of said adjacent or antagonist portions and

2) the state of the portion of the upper or lower dental arch in which said application site is formed prior to the creation of it;

processing, ~~with~~ by said processing unit, the transmitted signals in order to generate a three dimensional image of a relative position of said handpiece with respect to said portion; ~~an image for use in dentistry; and~~

displaying said image on a screen;

comparing said relative position with predefined limit reference positions stored in said electronic processing unit; and

indicating any straying of said relative position beyond said limit reference position,

whereby said three-dimensional image of the relative position of said handpiece with respect to said portion is usable for the assisted preparation of said application site in said portion.

2. **(Currently Amended)** The method according to claim 1, ~~characterized in that~~wherein said ~~acquisition step~~ acquiring steps comprises the emission of electromagnetic radiation from said first and second reference surfaces and the reception of the emitted radiation.

3. **(Currently Amended)** The method according to claim 1, ~~characterized in that~~wherein said ~~acquisition step~~ acquiring steps ~~comprise~~ comprises the emission of electromagnetic radiation toward said first and second reference surfaces and the reception of the radiation reflected/absorbed by said first and second reference surfaces.

4. **(Cancelled)**

5. **(Currently Amended)** The method according to ~~one or more of the preceding claims~~claim 1, ~~characterized in that~~wherein said first surface is associated with ~~at least one portion of either said upper dental arch or said lower dental arch and~~ said second reference surface is associated with a handpiece of the probe type in order to create a three-dimensional image of the state of said portion before a dental procedure.

6. – 7. **(cancelled)**

8. **(Currently Amended)** The method according to claim ~~7~~1, ~~characterized in that it comprises~~comprising the ~~steps of:~~ step of defining a first reference axis in said portion for preparing said application site and a second reference axis of said handpiece; ~~acquiring the relative position of said second axis with respect to said first axis; comparing the acquired relative position with predefined~~

~~limit reference positions stored in said electronic processing unit; and indicating the straying of said acquired relative position beyond said limit reference positions.~~

9. **(Currently Amended)** The method according to claim 8, ~~characterized in that~~wherein said relative position is defined by the angle of incidence formed by said first and second axes, said limit reference positions being defined by the maximum or minimum breadth of said angle of incidence.

10. **(Currently Amended)** The method according to ~~one or more of claims 7 to 9~~claim 1, ~~characterized in that it comprises~~comprising the steps of: detecting the amount of material removed by ~~the tool~~said handpiece of the tool type from the tooth or osteointegrated implant being worked in said portion and/or the height thereof; comparing at least one of said ~~acquired~~detected quantity ~~and/or and~~ height respectively with a predefinable maximum reference value and with a predefinable minimum reference value; and indicating the straying of said at least one of said acquired quantity ~~and/or and~~ height beyond said maximum and minimum reference values.

11. **(Currently Amended)** The method according to ~~one or more of the preceding claims~~claim 1, ~~characterized in that~~wherein said electromagnetic radiation belongs to the infrared range.

12. **(Currently Amended)** The method according to ~~one or more of the preceding claims~~claim 1, ~~characterized in that it comprises~~comprising storing said images in a memory unit associated with said processing unit.

13. **(Currently Amended)** The method according to ~~one or more of the preceding claims~~claim 1, ~~characterized in that it comprises~~comprising processing at

least one of the image of said application site ~~and/or~~ and the image that represents the relative motion between ~~said the~~ maxilla and ~~said the~~ mandible of the patient in order to generate, with said CAD software, ~~the a~~ three-dimensional model respectively of ~~said a~~ prosthesis and/or of a gnathological interarch device.

14. **(cancelled)**

15. **(Currently Amended)** The method according to ~~one or more of the preceding claims~~ claim 1, characterized in that it ~~comprises~~ comprising the steps of: transmitting said model of said prosthesis or of ~~said a~~ gnathological prosthesis to an auxiliary electronic processing unit in which a CAM software is implemented; extrapolating from said model the coordinates for controlling and actuating an electronically-controlled modelling unit; and transmitting said coordinates to said modelling unit in order to manufacture said prosthesis or said gnathological prosthesis.

16. **(Currently Amended)** The method according to ~~one or more of the preceding claims~~ claim 15, characterized in that wherein said electronic processing unit and said auxiliary electronic processing unit ~~mutually coincide~~ are the same processing unit.

17. **(Currently Amended)** The method according to ~~one or more of the preceding claims~~ claim 15, characterized in that wherein said modelling unit is a unit for milling a block of material.